



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

8701 S. Gessner, Suite 630
Houston, TX 77074

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 16, 2016

Mr. Wes Christensen
Vice President NGL Operations
ONEOK NGL Pipeline, LLC
100 West Fifth Street
Tulsa, OK 74102

CPF 4-2016-5014S

Dear Mr. Christensen:

Enclosed is a Notice of Proposed Safety Order (Notice) issued in the above-referenced case. The Notice proposes that you take certain measures with respect to your Sterling III Pipeline in Oklahoma and Texas to ensure pipeline safety. Your options for responding are set forth in the Notice. Your receipt of the Notice constitutes service of that document under 49 C.F.R. §190.5.

We look forward to a successful resolution to ensure pipeline safety. Please direct any questions on this matter to me at (713) 272-2852.

Sincerely,

R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: Notice of Proposed Safety Order and Copy of 49 CFR §190.239

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
Southwest Region
Houston, TX 77074**

_____)	
In the Matter of)	
)	
ONEOK NGL Pipeline, LLC)	CPF 4-2016-5014S
)	
Respondent)	
_____)	

NOTICE OF PROPOSED SAFETY ORDER

Background and Purpose

Beginning on May 18, 2015, pursuant to 49 U.S.C. § 60117, the Pipeline and Hazardous Materials Safety Administration (PHMSA) initiated an on-site Initial Operating Inspection (IOI) of the safety of the Sterling III Pipeline (Sterling III) facilities located in Oklahoma and Texas operated by ONEOK NGL Pipeline, LLC (ONEOK, the Operator).

As a result of the ongoing inspection, it appears that conditions exist on the Sterling III facilities that pose a pipeline integrity risk to public safety, property or the environment. Pursuant to 49 U.S.C. §60117(l), PHMSA issues this Notice of Proposed Safety Order (Notice), notifying you of the preliminary findings of the inspection, and proposing that you take measures to ensure that the public, property, and the environment are protected from the potential risk.

Preliminary Findings

- ONEOK has owned and operated Sterling III since completing construction and commissioning it in 2013. The Sterling III is consists 550 miles of 16-inch pipeline and 15 pump stations from Medford, OK to Mont Belvieu, TX. The pipeline is designed to transport a HVL (propane mix). The pump stations are Medford III, Lucien, Luther, Tecumseh, Latta, Blue River, Bells, Caddo Mills, Van Zandt, Poyner III, Salmon III, Groveton III, Goodrich, Cleveland III, and OMBS III.
- During PHMSA's field inspection of the ONEOK Sterling III Pipeline, makeshift appurtenances were observed by inspectors attached to the aboveground station piping on the discharge piping of several of the pumping stations. The makeshift appurtenances were placed in numerous locations on aboveground piping, downstream of the pumping equipment. The appurtenances consisted of a short section of structural steel balanced across the top of a branch pipe with attached fabric straps going underneath the piping.

- Upon PHMSA's observation of the makeshift appurtenances, Operator personnel accompanying the field inspection were asked to explain the nature and purpose of the makeshift appurtenances. The following information was acquired from the Operator:
 - The Variable Frequency Drive (VFD) pumps generated and conducted severe mechanical vibration into the station piping during some operating conditions.
 - The vibrations from the VFD pumps are suspected by the Operator to have caused cracks in welds on pump discharge piping on other ONEOK pipeline systems. Some of these cracks resulted in failures of the welds and release of commodity in other systems.
 - The makeshift appurtenances were temporary devices installed in attempt to reduce the vibration of the piping and prevent failures on the Sterling III pipeline due to weld cracking, which had been experienced on other ONEOK pipelines.
- The Sterling III Pipeline pump stations and station piping affected by the vibration issue include thirteen locations. The locations and number of pump units include the following: Medford III (three pumps), Lucien (two pumps), Tecumseh (two pumps), Latta (one pump), Blue River (one pump), Bells (one pump), Caddo Mills (one pump), Van Zandt (one pump), Poyner III (one pump), Salmon III (one pump), Groveton III (one pump), Goodrich (two pumps), and OMBS III (two pumps).
- At the time of the Sterling III inspection, ONEOK could not provide procedures for the installation of the makeshift appurtenances that PHMSA had requested. ONEOK was also not able to produce Operator Qualification procedures for installing the devices on a Part 195 regulated pipeline, or definitive engineering analyses that showed the makeshift appurtenances, or a more permanent version of the appurtenances, reduced the threat of failure. Subsequent to the field inspection where PHMSA requested an installation procedure, ONEOK sent PHMSA a document they represented as a procedure for installing the makeshift appurtenances. The document did not adequately cover the installation requirements, had no identification showing it was a ONEOK procedure, no revision date, and there was no indication that it had been incorporated into ONEOK's procedures using their Management of Change process.
- At the time of the PHMSA Sterling III inspection, the Operator could not confirm that operating restrictions had been implemented to reduce the threat of failure until the risk caused by the vibrations had been mitigated. ONEOK had not made any pressure reductions or filed any safety-related condition reports pertaining to this issue. The seriousness of the threat and urgency of implementing preventative measures is not reflected in the actions being taken by ONEOK.
- The only information provided by ONEOK based on PHMSA's request for analyses showing the effectiveness of the makeshift appurtenances or recommendations for a permanent solution were in the form of PowerPoint presentations or very brief reports authored by IVC Technologies of Houston, TX. The IVC documents confirm the severity of the vibration issue but offer no confirmation that the makeshift appurtenances or more permanent bracing will fully mitigate the threat. The solution that IVC indicates will remove 99% of the vibration is not being implemented by ONEOK. These analyses did not include any nondestructive examination of the welds to determine if the vibration had

already caused cracking in the welds. These documents also show that ONEOK knew about this vibration issue on other parts of their pipeline system as far back as August 2015 on the ONEOK Arbuckle Pipeline.

Given the integrity threat posed by the vibration issue on the ONEOK Sterling III Pipeline, PHMSA requested all engineering analyses pertaining to this issue, the failure investigations or root cause analyses performed, a complete explanation of the preventative and mitigative measures being taken by ONEOK, and how the threat had been incorporated into their Integrity Management Plan. The Operator did not provide an adequate response to this request.

Proposed Issuance of Safety Order

Section 60117(l) of Title 49, United States Code, provides for the issuance of a safety order, after reasonable notice and the opportunity for a hearing, requiring corrective measures, which may include physical inspection, testing, repair, or other action, as appropriate. The basis for making the determination that a pipeline facility has a condition or conditions that pose a pipeline integrity risk to public safety, property, or the environment is set forth both in the above-referenced statute and 49 CFR §190.239, a copy of which is enclosed.

After evaluating the foregoing preliminary findings of fact and considering the hazardous nature of the product transported, the pressure required for transporting such product, the characteristics of the geographical areas where the pipeline facility is located, the absence of a conclusive determination that the dampening methods used by ONEOK are sufficient to maintain the integrity of the pipeline, instances of cracking failures resulting in unplanned releases of products in pipeline systems operated by ONEOK with similar vibrational issues, and the potential that conditions could worsen or develop on other areas of the pipeline and potentially impact its serviceability, it appears that continued operation of the affected pipeline, without corrective measures, would pose a pipeline integrity risk to public safety, property, or the environment.

Accordingly, PHMSA issues this Notice of Proposed Safety Order to notify Respondent of the proposed issuance of a safety order and to propose that Respondent take the measures specified herein to address the potential risk.

Response to this Notice

In accordance with §190.239, you have 30 days following receipt of this Notice to submit a written response to the official who issued the Notice. If you do not respond within 30 days, this constitutes a waiver of your right to contest this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a safety order. In your response, you may notify that official that you intend to comply with the terms of the Notice as proposed, or you may request that an informal consultation be scheduled (you will also have the opportunity to request an administrative hearing before a safety order is issued). Informal consultation provides you with the opportunity to explain the circumstances associated with the risk condition(s) alleged in the Notice and, as appropriate, to present a proposal for a work plan or other remedial measures, without prejudice to your position in any subsequent hearing. If you and PHMSA agree within 30 days of informal consultation on a plan and schedule for you to address each identified risk condition, we may enter into a written consent agreement (PHMSA would then

issue an administrative consent order incorporating the terms of the agreement). If a consent agreement is not reached, or if you have elected not to request informal consultation, you may request an administrative hearing in writing within 30 days following receipt of this Notice or within 10 days following the conclusion of an informal consultation that did not result in a consent agreement, as applicable. Following a hearing, if the Associate Administrator finds the facility to have a condition that poses a pipeline integrity risk to the public, property, or the environment in accordance with §190.239, the Associate Administrator may issue a safety order.

Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

In your correspondence on this matter, please refer to **CPF 4-2016-5014S** for each document you submit, please provide a copy in electronic format whenever possible.

Proposed Corrective Measures

Pursuant to 49 U.S.C. §60117(i) and 49 C.F.R. §190.239, PHMSA proposes to issue to ONEOK NGL Pipeline, LLC a Safety Order (Order) incorporating the following remedial requirements with respect to its Sterling III Pipeline located in Oklahoma and Texas:

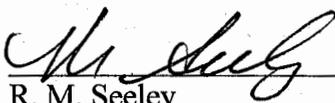
1. ONEOK must make, at a minimum, an immediate 20% pressure reduction on their Sterling III Pipeline as required by §195.55 and implement operational constraints on the pump units to reduce the vibration and threat of failure. The pressure reduction and operational constraints must remain in place until approval to resume normal operations is given by the PHMSA Southwest Region Director.
2. Within 30 days of receipt of the Order, ONEOK must submit to the PHMSA Southwest Region Director, a complete plan of inspection to determine the full extent of damage caused by the vibration. The plan must be submitted to the Southwest Region Director for approval prior to initiation. The plan, at a minimum, must include nondestructive examination of all piping and welds at the pumps stations by an independent third party using technology adequate to detect any defects and integrity threats resulting from the vibrations. These inspections would begin immediately following the Director's approval with a weekly written report of findings submitted to the Southwest Region Director at the same time the report is submitted to ONEOK. The Operator's proposed choice of the independent third party must also be submitted to the PHMSA Southwest Region Director for approval prior to the commencement of work.
3. The operator must immediately inform the PHMSA Southwest Region Director of any integrity threatening defects found by the inspection in Item 2. The Operator must also inform the PHMSA Southwest Region Director of the repair plans and justify the method of repair and timing based on the specific defect(s) in writing. The

information provided to PHMSA must include details about the type, size, and location of the defect, the proposed repair method, and the timing of the repair.

4. Within 30 days of receipt of the Order, ONEOK must submit a plan to the PHMSA Southwest Region Director for approval, to perform a complete, systematic analysis of the vibration problem, determine the specific operational conditions where the vibration occurs, and propose mitigation measures to prevent damage to the pipeline from the vibrations. The proposed plan must be performed by an independent third party, including a means to verify the effectiveness of the mitigation measures, and perform periodic monitoring of the effectiveness after the mitigation measures are implemented. The independent third party must also be approved by the PHMSA Southwest Region Director prior to the commencement of work.
5. Based on the results of Item 4, ONEOK must submit to the PHMSA Southwest Region Director a written plan and schedule to implement the specific measures selected by the Operator to mitigate the integrity threat caused by the vibration. The plan must be approved by the PHMSA Southwest Region Director prior to the commencement of work. The plan may propose a limited implementation followed by monitoring and testing to ensure the effectiveness of the measures. However, ONEOK must complete testing and implementation of the selected mitigative measures at all affected locations within one year of the Order. If a limited implementation is first proposed to confirm the effectiveness, subsequent required implementation plans must be submitted to the Southwest Region for approval within 30 days after the confirmation period.
6. The Director may grant an extension of time for compliance with any of the terms of the Safety Order upon a written request timely submitted demonstrating good cause for an extension.
7. ONEOK may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator shall be final.

The actions proposed by this Notice of Proposed Safety Order are in addition to and do not waive any requirements that apply to Respondent's pipeline system under 49 C.F.R. Parts 190 through 199, under any other order issued to Respondent under authority of 49 U.S.C. § 60101 et seq., or under any other provision of Federal or state law.

After receiving and analyzing additional data in the course of this proceeding and implementation of the work plan, PHMSA may identify other safety measures that need to be taken. In that event, Respondent will be notified of any proposed additional measures and, if necessary, amendments to the work plan or Safety Order.



 R. M. Seeley

Director, Southwest Region
 Pipeline and Hazardous Materials Safety Administration



 Date issued